

DESCRIPTION OF A NEW SPECIES OF THE GENUS *APETHYMUS* BENSON
(HYMENOPTERA: TENTHREDINIDAE) FEEDING ON *QUERCUS*
ACUTISSIMA CARRUTHERS (FAGACEAE) IN JAPAN

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Abstract.—*Apethymus kunugi*, n. sp., from Japan is described and illustrated. It was reared from a larva feeding on *Quercus acutissima* Carruthers (Fagaceae). A key is provided for the six Japanese species of *Apethymus*.

Key Words: Symphyta, Tenthredinidae, Allantinae, *Apethymus*, new species, food plant, *Quercus acutissima*

Apethymus Benson, a genus of the subfamily Allantinae, is Palearctic and includes about 15 species (Koch 1988). Five species are listed for Japan by Abe and Togashi (1989): *A. hakusanensis* Togashi, 1976, *A. hisamatsui* Togashi, 1978, *A. kaiensis* Togashi and Shinohara, 1975, *A. kuri* Takeuchi, 1952, and *A. quercivorus* Togashi, 1980.

I had the opportunity to examine a specimen of *Apethymus* which was reared from a larva feeding on the leaves of *Quercus acutissima* Carruthers from Tochigi Prefecture, through the courtesy of Dr. K. Tanaka. According to examination of the Japanese species and the European literature (Koch 1988), this specimen resembles *A. hakusanensis* and *A. cereus* (Klug) from Japan and Europe, respectively. However, this specimen is separated by the coloration and the characters of the clypeus and the sawsheath. Thus, I concluded that the specimen represents a new species, and I describe it here and give a key to the Japanese species.

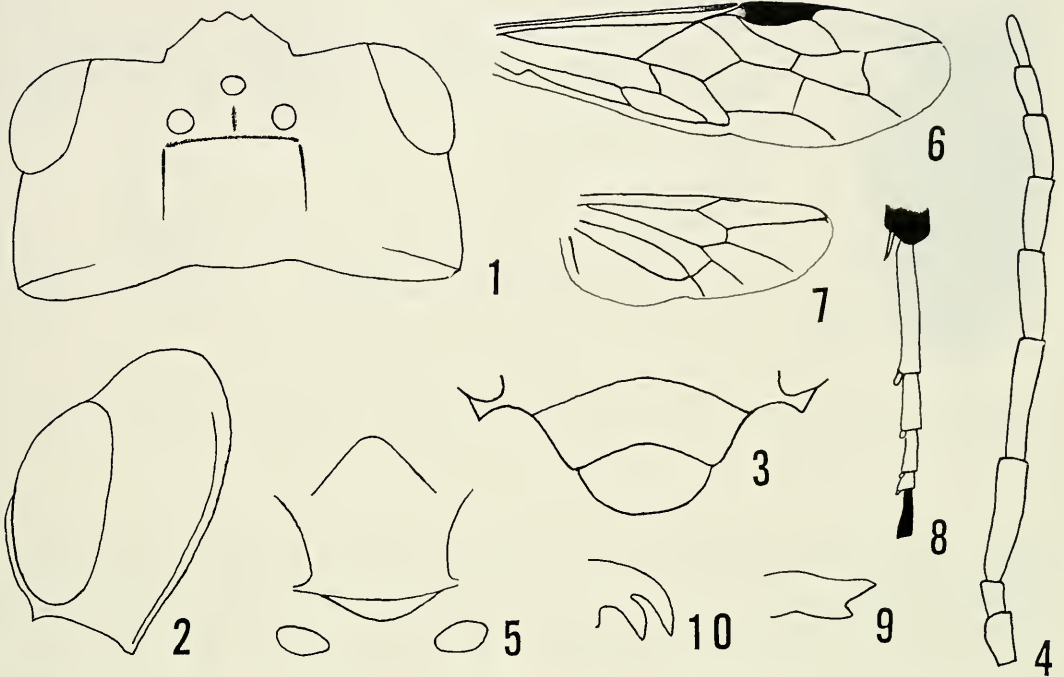
KEY TO JAPANESE SPECIES OF *APETHYMUS*
(Females)

1. Antenna entirely black 2
– Apical three segments of antenna milky white 3

2. Posterior margin of pronotum yellow; second tergite entirely black; postocellar area rather pentagonal; postorbital groove distinct *hakusanensis* Togashi
– Pronotum black; lateral side of second tergite milky white (Fig. 11); postocellar area subquadrate; postorbital groove indistinct *kunugi*, n. sp.
3. Most of sixth antennal segment milky white; second to fifth tergites reddish yellow *hisamatsui* Togashi
– Sixth antennal segment black; second to fifth tergites black 4
4. Lateral side of third tergite milky white *kaiensis* Togashi and Shinohara
– Third tergite black 5
5. Second tergite black; apical three antennal segments milky white; postocellar area without median longitudinal suture *kuri* Takeuchi
– Lateral side of second tergite milky white; apical portion of seventh antennal segment, apical half of eighth antennal segment, and ninth antennal segment except ventrally milky white; apical half of postocellar area with a median longitudinal suture *quercivorus* Togashi

Apethymus kunugi Togashi, new species
(Figs. 1–13)

Female.—Length, 12 mm. Body including antenna black with following from almost white to milky white: labrum, tegula, cenchrus, lateral side of second tergite (Fig. 11), very narrow posterior margin of third



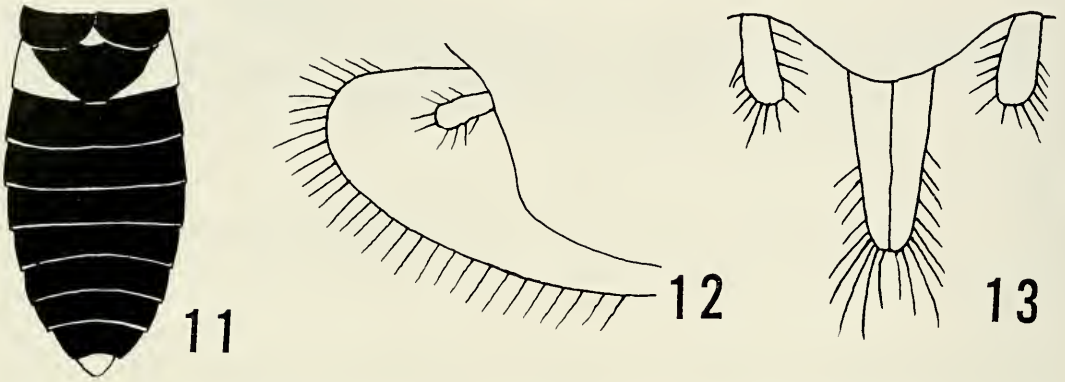
Figs. 1–10. *Apethymus kunugi*, holotype. 1, Head, dorsal view. 2, Head, lateral view. 3, Clypeus and labrum, front view. 4, Antenna, lateral view. 5, Mesoscutellum, dorsal view. 6, Forewing. 7, Hindwing. 8, Hind tarsus, lateral view. 9, Front inner tibial spur, lateral view. 10, Tarsal claw, lateral view.

to eighth tergites, and last tergite (Fig. 11). Wings hyaline, stigma black with basal portion milky white; costa pale yellow with apical portion dark brown; other veins dark brown to black. Legs black with following milky white: hind trochanter, fore- and mid-tibiae except for apical third, hind tibia except for apical half, and all tarsi except for apical segment.

Head: Transverse, slightly enlarged behind eyes (Fig. 1); interocellar furrow distinct; postocellar furrow slightly depressed; lateral furrows distinct and deep; postocellar area slightly convex, subquadrate (Fig. 1); OOL:POL:OCL = 1.2:1.0:1.7; frontal area nearly flattened; median fovea deep and elongate; lateral fovea deep and elongate; antenno-ocular distance nearly as long as distance between antennal sockets; supra-clypeal area slightly convex; basal half of clypeus with a median carina, anterior margin emarginate (Fig. 3); malar space

narrow, nearly half as long as diameter of front ocellus; postorbital groove indistinct (Fig. 2); occipital carina distinct laterally (Fig. 2). Antenna nearly as long as costa of forewing; relative lengths of segments 1–9 about 1.7:1.0:4.1:4.1:2.8:2.4:2.0:1.5:1.7; pedicel longer than breadth (ratio between length and breadth as 1.0:0.7).

Thorax: Median lobe of mesoscutum with a distinct median furrow; mesoscutellum gently convex, apical margin acute (Fig. 5); mesoscutellar appendage very short (Fig. 5); cenchrus small, distance between them twice as long as each. Wing venation as in Figs. 6, 7; hind wing without middle cell; petiole of anal cell of hind wing very short. Legs with fore inner tibial spur as in Fig. 9; tarsal claw with lobe and large preapical tooth (Fig. 10); inner hind tibial spur slightly shorter than breadth of hind tibia (ratio between length of spur and breadth of tibia as 1.0:1.3); hind basitarsus



Figs. 11–13. *Apethymus kunugi*, holotype. 11, Abdomen, dorsal view. 12, Sawsheath, lateral view. 13, Sawsheath, dorsal view.

slightly longer than following three segments combined (Fig. 8).

Abdomen: Sawsheath as in Figs. 12, 13; cercus short, half as long as sawsheath along dorsal margin.

Punctuation: Head and thorax distinctly, moderately, and closely punctured, spaces between punctures nearly impunctate; supraclypeal area and clypeus coarsely and reticulately sculptured; labrum nearly impunctate, shining; lower half of mesopleuron rather sparsely and finely punctured, spaces between punctures nearly impunctate, shining; katepimeron finely and densely punctured, matt; abdominal tergites shagreened.

Male.—Unknown.

Distribution.—Japan (Honshu).

Food plant.—*Quercus acutissima* Caruthers (Japanese name: Kunugi).

Holotype.—Female, emerged on 31.X.1976 from larva feeding on leaves of *Quercus acutissima*; Mt. Matsugamine, Utsunomiya City, H. Watanabe leg. Deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Etymology.—Named after the Japanese name of the host plant, Kunugi, a noun in apposition.

Remarks.—This new species is closely allied to *Apethymus hakusanensis*, but it is easily distinguished from the latter by the

black pronotum (posterior margin milky white in *A. hakusanensis*), by the milky white macula on the second tergite (Fig. 11) (second tergite entirely black in *A. hakusanensis*), by the absence of the postorbital groove (distinct in *A. hakusanensis*) and by the shape of the sawsheath (see fig. 5 in Togashi 1980 and Fig. 12). From *A. cereus*, the new species is easily distinguished by the black coxae (lateral side of midcoxa yellow in *A. cereus*), by the milky white hind trochanters (all trochanters black in *A. cereus*), and by the shape of the sawsheath (see fig. 3-1 in Koch 1988 and Fig. 12). From *A. proceratis* Lee and Ryu, 1996, from Korea, *A. kunugi* is easily separated by the mostly black abdomen and legs (both reddish brown in *A. proceratis*).

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LITERATURE CITED

- Abe, M. and I. Togashi. 1989. Tenthredinidae, pp. 545–558. In Hirashima, Y., ed. supervisor. A Check List of Japanese Insects, Vol. II, pp. 541–1088. Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (in Japanese).

- Koch, F. 1988. Die palaearktischen Arten der Gattung *Apethymus* Benson, 1939 (Hymenoptera, Symphyta, Allantinae). Mitteilungen der Münchner Entomologische Gesellschaften 78: 155–178.
- Lee, J. W. and S. M. Ryu. 1996. A systematic study on the Tenthredinidae (Hymenoptera: Symphyta) from Korea II. Ten new species of the Tenthredinidae. Entomological Research Bulletin (KEI) 22: 17–34.